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BIOGRAPHIES OF SELECTED SOVIET SCIENTISTS

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FOREWORD

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BIOGRAPHIES OF SELECTED SOVIET SCIENTISTS

[Following are the translations of selected articles concerning the Soviet scientists whose names are listed in the table of contents below. Complete bibliographic information on each article is given along with the respective translations.]

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ARKHAR MUZAFAROVICH MUZAFAROV

(on the occasion of his fiftieth birthday)

[Following is the translation of an unsigned article in Uzbekskiy Biologicheskii Zhurnal (Uzbek Journal of Biology), No 5, 1959, pages 72-73.]

In October 1959, the scientific community of the city of Tashkent marked the 50th birthday and 25th anniversary of the scientific activity of Doctor of Biological Sciences Arkhar Muzafarovich Muzafarov, Professor at the Central Asian State University and Director of the Botany Institute of the Uzbek SSR Academy of Sciences.

In congratulating A.M. Muzafarov, we honor a representative of the first generation of Soviet scientists who through his social and scientific-pedagogical endeavors aided the development of science in socialist Uzbekistan.

Arkhar Muzafarovich Muzafarov was born in 1909 at Chinkent the son of a peasant. He received his higher education at the Fergana Pedagogical Institute. He has been engaged in pedagogical activities since 1929, at first teaching in secondary and technical schools while still a student himself, and later in higher educational institutions. All of his subsequent pedagogical activity was closely tied in with scientific research.

In 1937, while holding a teaching post in biology and botany at the Fergana Pedagogical Institute, Muzafarov initiated a study of the aquatic flora found in the Fergana Valley for which he received the degree of Candidate of Biological Sciences in 1943.

In January 1946, A.M. Muzafarov was invited to carry on with his work at the Uzbek SSR Academy of Sciences. In 1952 he successfully defended a doctoral dissertation on the "Mountain Pool Algae of Central Asia", and in 1954 was

named Professor in the department of the lower plants. He has been the head of the Botany Institute since 1936. Under the direction and through the direct participation of A.M. Muzafarov, the Institute has completed a number of major research efforts on the regional flora of Uzbekistan. He has made a significant contribution to the study of algal flora, publishing 15 scientific works within the last 10-12 years, two of them monographs. The works submitted represent generalizations of the work carried out by the honored scientist. Much attention in these works is devoted to the study of the problems of algology connected with the task of improving soil productivity, making effective use of irrigation waters in farming in the Uzbek Republic, etc.

Such writings of A.M. Muzafarov as "The Algae of Irrigation Canals in Fergana and Their Significance" (1950), "On the Significance of Algae in Raising Soil Productivity" (1944), "On Hydrobiological Studies of Irrigators in Uzbekistan" (1951), "The Significance of Blue-Green Algae in Atmospheric Nitrogen Fixation" (1953), "The Algal Flora of Mountain Pools in Central Asia" (1956) are of great theoretical and practical value. In the course of his investigations, A.M. Muzafarov identified over 300 Central Asiatic algal species, over 20 of which had previously been unknown to science.

While carrying on a large and complex body of scientific research and organizational efforts, Arkhar Muzafarovich still manages to devote much time, energy, and knowledge to the preparation of cadres. He strives to inculcate in the minds of his students the qualities of scientific conscientiousness, humility, love for concrete knowledge, diligence, and perseverance in their labors on behalf of the Motherland as it moves along the path to Communism.

Let us therefore wish the honored scientist success on this noble path, as well as health and many long years of life.

OLEG ALEKSEYEVICH DROZDOV

(on the occasion of his fiftieth birthday)

[Following is the translation of an article by A.F. Zakharova in Izvestiya Vsesoyuznogo Geograficheskogo Obshchestva (News of the All-Union Geographical Society), No 3, Moscow, 1960, pages 277-278.]

18 October 1959 was the 50th birthday of Doctor of Geographical Sciences Professor Oleg Alekseyevich Drozdov, a leading Soviet climatologist.

O.A. Drozdov was born in 1909 in Bucharest. At the age of four, his parents brought him to Russia; in 1927 he graduated from a secondary school in Kazan' and immediately entered the physico-mathematical department of Kazan' University, whence he graduated with a geophysics major in 1930 in the unusually short time of three years.

In December 1930, Oleg Alekseyevich began to work in the field of meteorology and climatology in the Tatar SSR. Here for a number of years he headed the Climatology Sector of the Hydrometeorological Service Administration.

In 1931, the Uchenyye Zapiski (Scientific Notes) of Kazan' University published the first scientific paper of Oleg Alekseyevich on the subject of secular climatic fluctuations. In subsequent years, he wrote on his research on mathematical methods for meteorological data processing, the principles of meteorological station deployment, and other climatological problems.

In 1931, Oleg Alekseyevich began to teach in the geophysics division of Kazan' University.

In 1934, Oleg Alekseyevich was transferred to the Main Geophysical Observatory (GGO -- Glavnaya Geofizicheskaya Observatoriya) in Leningrad, where he assumed the post of deputy director of the climatology department.

In 1937 Oleg Alekseyevich received the title of Senior Scientist, and in 1938 received the degree of Candidate of Physico-Mathematical Sciences from the University of Leningrad.

At the start of World War II, Oleg Alekseyevich joined the ranks of the people's civilian army (narodnoye opolcheniye), but was soon called upon to resume his interrupted scientific work. After the War, Oleg Alekseyevich returned to the GGO imeni A.I. Voyeykov, where in 1947 he was named director of the climatology department.

In addition to working on the major problems of climatology, Oleg Alekseyevich also was engaged in extensive pedagogical efforts, mainly in the Geography Department of Leningrad University, where since 1938 he has been presenting the main course of lectures in the meteorology and climatology division; he has also taught various special courses designed to raise the qualifications of the staff members working for the Hydrometeorological Service and the Leningrad Hydrometeorological Institute.

In January 1948, Oleg Alekseyevich successfully defended before the Leningrad University Geography Department a dissertation on the subject of "The Mean Monthly and Annual Precipitation Levels in the USSR", submitted in candidacy for the degree of Doctor of Geographical Sciences. The University awarded him a special prize for this work in 1950. In 1954, having the title of Professor (conferred on him in 1950), Oleg Alekseyevich was chosen to head the University's meteorology and climatology department while still continuing to work at the GGO.

Oleg Alekseyevich Drozdov expertly combines physical and mathematical methods in his studies of climate which take into account special local characteristics of the geographical terrain in question. All of his scientific activities are carried on in close contact with the needs of the socialist economy. O.A. Drozdov has over 150 scientific writings to his name, most of them devoted to the methods of mathematical treatment for meteorological observational data.

In working out statistical climatic indices, Oleg Alekseyevich always conducts his researches with a clear purpose in mind, true to his calling of geographer. Simply stated, this purpose is that of studying the laws and regularities governing the formation of climate and its spatial and temporal structure, with due emphasis on the necess-

ity of investigating the physical significance of statistical indices covering specific areas. Oleg Alekseyevich is devoting a great deal of attention to the problems of homogeneity among series of observations and the theory of reducing observational series to a long-term pattern. Along with other scientists (A.A. Kaminskiy, Ye.S. Rubinshteyn) he created the theory for the reduction of observational series of varying duration to a single-duration period.

Among the works on climatology written by Oleg Alekseyevich, the central position is occupied by his monograph (dissertation) entitled "The Mean Monthly and Annual Precipitation Levels in the USSR". Written on the basis of extensive quantitative data impeccably selected and processed, the book is not only climatographic in content. It throws light on a number of important problems in general climatology.

Also of a climatographic nature are his works on the classification of atmospheric processes on the territory of the USSR which have a bearing on weather forecasting. This group of works also includes the considerable number of climatic maps drawn by Oleg Alekseyevich. The climatic maps of the "Great Soviet World Atlas" and the "Marine Atlas" were an important contribution to the study of the climate of the Soviet Union and the world. It should also be mentioned in passing that Oleg Alekseyevich has made his contribution to the development of climatological cartographic methodology in putting forth the idea that a climatic map must not be constructed merely on the basis of interpolated data obtained at existing stations. Taking into account the fact that suppositions as to a continuous meteorological field frequently do not correspond to the actual state of affairs, Oleg Alekseyevich insists on the detailed preliminary study of the physico-geographic conditions in the area in question, as well as on the quantitative evaluation of regularities in the distribution of climatic elements over various areas.

It is impossible not to mention the works of Oleg Alekseyevich devoted to the so-called "climatology of gradients" whose development has been occasioned by the necessity of solving a number of practical problems connected primarily with the rationalization of the meteorological station network and the choice of optimum observational intervals. These matters received a great deal of attention on the part of the staff of the climatology department of the GGO under

the direction of Oleg Alekseyevich. There has appeared a whole body of writings on the theory of meteorological element fields, in particular on the problems of the character of fields, the application of interpolation methods to their study, the possibility and accuracy of interpolation procedures, etc. The most important theoretical generalizations are contained in the studies of Oleg Alekseyevich himself.

Over a number of years, Oleg Alekseyevich participated in and directed research on moisture circulation as a factor in climate formation. These studies laid the groundwork for the formulation of new and more solidly based concepts of moisture circulation. Their application permitted the discovery of a number of new regularities in the formation of precipitates in various geographical regions.

Oleg Alekseyevich worked out quantitative moisture circulation evaluation techniques (altitude of effective moisture transference, coefficient of moisture consumption, etc.) and proposed original methods for such evaluation computations. Having clearly defined the role of relative humidity in the process of condensation, Oleg Alekseyevich elaborated the role of local evaporation as a factor in the stimulation of precipitation; then, on the basis of these discoveries, he pointed out the error of concepts having to do with the supposed threefold cycle of moisture particles over continents.

Oleg Alekseyevich is an excellent field expedition worker and a champion of comprehensive research methods. Indicative in this respect was the climatological expedition despatched by the GGO into the 'Kamennaya Step' which he headed in 1951. The materials obtained in the course of the expedition made possible the solution of many important problems involved in climatic melioration. At the present time, Oleg Alekseyevich is directing a major glacier study expedition on the Fedchenko Glacier being conducted under the auspices of the Geography Department of Leningrad University. He took part in the field work of the expedition for two seasons. As a mountain climber, he assumed the direction of observations in the highest firn zone of the glacier. The expedition, working within the context of the International Geophysical Year program, discovered a number of peculiarities characterizing the meteorological and hydrological in the region of the glacier and carried out important geomorphological studies.

Oleg Alekseyevich is an experienced teacher. His lectures, which are intimately connected with current research, impart to his young students not only factual knowledge but also an original elaboration of problems under investigation. O.A. Drozdov has generalized his teaching experience in a number of major texts. First of all, one should mention his coauthorship of a Textbook of Climatology edited by Ye.S. Rubinshteyn. This book enjoys well-deserved fame and has been translated into several foreign languages. O.A. Drozdov's Foundations of the Climatological Treatment of Meteorological Observational Data issued by Leningrad University in 1956, and the Methods for the Climatological Treatment of Meteorological Observational Data (Gidrometizdat, 1957) which he edited are both standard reference works.

Oleg Alekseyevich is an active member of the All-Union Geographical Society. He has headed its meteorological commission since 1954. The contributions of Oleg Alekseyevich to the development of Soviet climatology have received high recognition from the Soviet government: he has been awarded two "Insignia of Honor", the "Red Banner of Labor", and other medals.

Soviet scientists wish to express to Oleg Alekseyevich their sincere wishes for future success in his scientific, pedagogical, and social endeavors.

ALEKSANDR ALEKSANDROVICH KOSTYUKOV

[Following is the translation of an unsigned article in Morskov Flot (The Seagoing Fleet), No 1, 1960, page 45.]

The staff of the Odessa Institute of Seagoing Fleet Engineers has marked the 50th birthday of Doctor of Technical Sciences Professor Aleksandr Aleksandrovich Kostyukov, who has travelled the long road from a childhood spent in an orphanage to the status of a scientist.

Born the son of a laborer, Aleksandr Kostyukov lost his father at an early age. If he were living in the pre-Revolutionary era, he would have been threatened with neglect. But the Soviet government did not abandon the boy to his own fate. The orphanage in which he was placed gave him his real start in life. Here he was taught to love his work and studies. In 1928, while still holding a full-time job, A. Kostyukov successfully graduated from a workers' school (rabfak), and four years later completed his studies in marine engineering at the Odessa Water Transport Engineering Institute (now the Odessa Institute of Seagoing Fleet Engineers). As a young specialist who demonstrated an inclination for scientific studies, A. Kostyukov was soon admitted to graduate study. From this time, all of his scientific, teaching, and administrative activities are inseparably connected with the Odessa Institute.

After his defense of his Candidate dissertation in 1936, A. Kostyukov received the scientific title of docent. In 1939 he assumed direction of the "Vessel Theory" department, then of the teaching division, and since 1949 has served as deputy director of the Institute teaching division.

In 1943 A.A. Kostyukov joined the ranks of the Communist Party.

In the course of his 27 years as a teaching scientist

at the Odessa Institute, Aleksandr Aleksandrovich has guided a whole generation of marine engineers for the sea-going fleet. Many of his pupils presently occupy responsible scientific and engineering posts.

A.A. Kostyukov's writings constitute a significant contribution to the development of velocity potential theory, the theory of flow set up in a fluid by a moving body, ship wave and ship wave resistance theory, and methods for the practical calculation and analysis of wave resistance. The results of his many-year research in this field were summed up in his doctoral dissertation entitled "The Theory and Calculation Methods of Wave Formation and Vessel Wave Resistance", which he defended in 1957. This work was highly commended by many major scientists, including Academicians Nekrasov, Kochin, et al.

A.A. Kostyukov has a total of over 40 scientific writings to his name dealing with the most complex problems of ship theory.

Aleksandr Aleksandrovich skillfully combines his productive scientific endeavors with administrative and extensive social activities. He is a member of the Plenum of the Odessa City Committee of the Ukrainian Communist Party.

In recognition of his great and fruitful labors, the Soviet government has conferred on Aleksandr Aleksandrovich the high honor of the "Red Banner of Labor" order. Let us wish him further successes in his work.

PETR LEONT'YEVICH PASTERNAK

[Following is the translation of an unsigned article in Beton i Zheleznyy Beton (Concrete and Reinforced Concrete), No 1, 1960, page 38.]

20 January 1960 marked the 75th birthday and 55th anniversary of the engineering, scientific, and pedagogical activities of Member of the USSR Academy of Building and Architecture, Doctor of Technical Sciences, Professor Petr Leont'yevich Pasternak.

After graduating in 1910 from the Polytechnic Institute at Zurich, P.L. Pasternak devoted himself to the planning and erection of reinforced concrete structures, as well as to the solution of theoretical problems involved in the use of reinforced concrete.

Prior to the 1920's, P.L. Pasternak planned and supervised the construction of reinforced concrete buildings in France, Switzerland, and Russia which were among the largest of their kind at the time. During this period in his career, P.L. Pasternak began to attack a number of problems in construction design. Over the years 1922-1929 he published about 15 papers on the structural mechanics of bar systems, the theory involved in the computation of beams and casings on elastic foundations, and computation and planning of reinforced concrete reservoirs and other structures. In 1924 he received the degree of Doctor of Technical Sciences for original research into the calculation of multiple statically indeterminate systems, which culminated in 1927 with the publication of the well-known book entitled Berechnung vielfach statisch unbestimmte Stab- und Flächentragwerke (The Calculation of Multiple Statically Indeterminate Beam and Support Structures).

In 1929 P.L. Pasternak embarked on his scientific-pedagogical career as technical director and professor at the "Giprostroy" Institute of the People's Commissariat of Heavy

Industry, organized in Moscow for the speeded-up turnout of civil engineering cadres. At the present time he heads the reinforced concrete construction department at the Moscow Civil Engineering Institute imeni V.V. Kuybyshev. During his 30-year tenure as a teacher scientist, P.L. Pasternak has helped to produce many engineers specializing in reinforced concrete, and Candidates and Doctors of Science.

In the course of these years, P.L. Pasternak published about 30 studies on the calculation of frames and casings and reinforced concrete theory. He devoted much attention to the improvement and wide introduction of engineering methods for the calculation and design of structures on an elastic foundation, as well as to the development of calculation and design techniques for complex structures; he wrote an entire treatise on the latter subject entitled Complex Structures (Stroyvyenmorizdat, 1948). P.L. Pasternak took an active part in the formulation of new reinforced concrete design norms; he also heads a number of scientific research projects in the field of prestressed concrete.

For many years P.L. Pasternak has been the head planning engineer and consultant at a number of major planning organizations. He supervised the planning of reinforced concrete buildings and structures for the Magnitogorsk and Kuznetsk Metallurgical Combines, the Kama Paper Combine, the Novosibirsk Opera Theater, of industrial facilities for Uralmash, plants at Irkutsk, Sverdlovsk, and Orsk, and support structures for public and residence buildings in Moscow and other Soviet cities.

In 1956 P.L. Pasternak was elected to membership in the USSR Building and Architectural Academy.

The editorial board and readers of the journal Beton i zhelezobeton (Concrete and Reinforced Concrete) extend their hearty congratulations to Petr Leont'yevich Pasternak on the occasion of his 75th birthday and wish him good health, long life, and new success in his work.

VIKTOR IVANOVICH IVANOV

[Following is the translation of an unsigned article in Izvestiya Vysshykh Uchebnykh Zavedeniy -- Energetika (Herald of the Higher Educational Institutions -- Power Production), No. 5, 1960, pages 170-171.]

Professor Viktor Ivanovich Ivanov, chairman of the department of "High-Voltage Electron-Ionic Converters" of LETI (Leningradskiy Elektrotekhnicheskiy Institut -- Leningrad Electrotechnical Institute) and one of the founders of protective relay technology was born the son of a train engineer in 1900.

Upon his graduation from a gymnasium in the town of Penza, he studied in the physico-mathematical department of the University of Saratov during the years 1918-1920, working simultaneously as a railway electrician.

In 1927, having completed his studies at the Electrotechnical Institute imeni V.I. Ul'yanov (Lenin), he began to work at Lenergo (Leningrad Power Plant) in a field which was completely new at that time -- relay protection and systems automation. As the scientific director and one of the organizers of the Relay Protection Service, V.I. Ivanov created and headed the Leningrad school of relay engineers.

For a number of years, V.I. Ivanov has served as consultant to such major planning organizations as Teploenergoproekt, Gidroenergoproekt, Lenergo, etc., as well as to a number of scientific organizations with which he cooperated directly in the solution of the basic problems involved in the development of power production in the Soviet Union.

In 1932 there appeared in print V.I. Ivanov's book entitled "Relays and Relay Protection" which represented the first systematic elaboration of the problems of relay protection for power systems. This book was chosen as the

first textbook on the subject. For the period of a decade, all Soviet engineers used V.I. Ivanov's book as their standard text.

Simultaneously with his engineering activities, V.I. Ivanov carried on intensive scientific research work in the field of relay protection as head of the Protection Section at the Laboratory imeni Professor A.A. Smurov.

His thorough insight into transient conditions in power systems enabled V.I. Ivanov to work on the development of a theory of improved types of protection. Special mention should be made of the results obtained by V.I. Ivanov in the field of high-frequency blocking for relay protection. The utilization of systems of this type at a number of power installations and especially at Uralenergo facilitated the solution of the problem of an uninterrupted supply of power for industry during World War II.

In 1943 V.I. Ivanov defended his doctoral dissertation on the problem of the passage of high-frequency currents along transmission lines -- a matter of great importance to power systems automation.

Since 1947 V.I. Ivanov has headed the department of high-voltage technology which has served as the basis for the creation of the department of electron-ionic high-voltage converters; he also directs a number of important projects in the field of high-voltage technology and high-power pulse work. Starting at the same time, V.I. Ivanov took part in work on the investigation of transient processes and protective methods with reference to direct current transmission at the Direct Current Scientific Research Institute; since 1951 he has been working on the problems of long-distance transmission automation at the Electromechanics Institute of the USSR Academy of Sciences. In the last few years he has taken part in the creation of an electrodynamic model at the Leningrad Branch (otdeleniye) of the Automation and Remote Control Institute of the USSR Academy of Sciences.

It is also necessary to mention the work being conducted by V.I. Ivanov at LETI on special devices for the relay protection of the long Moscow-Kuybyshev transmission lines and the use of radar with reference to automation and relay protection.

Altogether, V.I. Ivanov completed over 100 original projects in the field of relay protection and automation, some of which were described in the scientific-technical magazines Avtomatika i Telemekhanika (Automation and

Remote Control), Elektricheskiye Stantsii (Electrical Power Stations), Elektrichestvo (Electricity), and Izvestiya Vuzov SSSR -- Energetika (Herald of USSR Higher Educational Institutions -- Power Production).

Professor V.I. Ivanov engages in extensive pedagogical activities in the basic disciplines of automation and relay protection. For a number of years, he taught the following courses: power systems relay protection and automation, triggering control apparatus, electrical machine apparatus and regulation theory, electrical drive apparatus and regulation, aircraft electrical equipment, electrical machines, and a number of other subjects.

V.I. Ivanov has taught at the Leningrad Electrotechnical Institute imeni V.I. Ul'yanov (Lenin), the Leningrad Polytechnic Institute imeni M.I. Kalinin, the Military Air Force Engineering Academy imeni N.Ye. Zhukovskiy, the Ural Industrial Institute, and in various special programs designed to improve the qualifications of engineers in the field of relay protection and automation.

Along with his manifold pedagogical and scientific endeavors, V.I. Ivanov takes an active part in Leningrad community activities.

NIKOLAY VASIL'YEVICH ORLOVSKIY

(on the occasion of his 60th birthday and 35th anniversary
of his agronomic and social activities)

[Following is the translation of an unsigned
article in Pochvovedeniye (Soil Science), No 1,
1960, pages 111-112.]

The month of February 1959 marked the 60th birthday
and 35th anniversary of the scientific, agronomic, and social
activities of Doctor of Agricultural Sciences Professor
Nikolay Vasil'yevich Orlovskiy.

While still a student at the Temiryazev Agricultural
Academy in the years 1921-1922, N.V. Orlovskiy was already
conducting experiments with mineral fertilizers on drained
swamplands in the Podmoskov'ye (Moscow area) and the sovkhozes
(State Farms) under the Glavsenkhoz. He completed his senior
project in the laboratory headed by D.N. Pryanishnikov. Upon
graduating from the Academy in 1924-1925, he worked at the
Buzuluk Experimental Station under the supervision of the
well-known experimentalist S.S. Bazhanov. In 1926-1927 he
headed the seed growing section of the Saratov Oblast Agri-
cultural Administration and organized a program of seed
growing in the Nizhneye Povolzh'ye (Lower Volga River area)
under the direction of Professor G.K. Meyster. In 1927 he
founded an agrochemical laboratory at the Ural Experimental
Station (Western Kazakhstan). From that time to the present,
his activities have been bound up inseparably with experi-
mental studies: in Western Kazakhstan until 1933, and later
in Siberia (at the Siberian Agricultural Scientific Research
Institute, the Siberian Animal Husbandry Scientific Research
Institute and the Ubinsk Experimental Melioration Station,
as well as experimental stations and regional institutes of
the Altayskiy and Krasnoyarskiy krays). In 1944 he began his
work at the higher educational institutions -- at first

(1944-1950) at the Novosibirsk, then (1950-1958) at the Altay, and presently at the Krasnoyarsk Agricultural Institutes, where he now heads the department of soil science and agrochemistry.

Nikolay Vasil'yevich is the author of over 60 published papers. He was engaged in the investigation of the major problems of great timeliness in the field of agriculture. To this branch of the field belongs his work on the problem of the evaluation of natural deposits and crop rotation with perennial grasses in Western Kazakhstan from the standpoint of soil science and agronomy.

From the same standpoint, he carried out studies of the total effects of irrigation on the colloidal complex, physical properties, and nutritive and saline conditions of dark (chestnut-brown) strongly alkaline soil; this comprehensive investigation included many experiments carried out at the station and the analysis of soil formation in topographical depressions typical of Western Kazakhstan and the Zavolzh'ye (Trans-Volga area).

N.V. Orlovskiy's works on excessively saline soils are widely known. In Western Kazakhstan he carried out the first experiments with gypsum treatment of strongly alkaline soils under conditions of irrigation. These experiments were continued without irrigation in the Omsk Oblast (1934-1938). He originated the technique of covering over alkaline patches with black earth which is presently being put into practice.

Extensive studies have been carried out on the effects of mineral fertilizers on soils of the black-alkaline complex, and especially on the toxicity of the absorbed sodium and salts with respect to plants; these studies culminated in the grouping of cultures according to their ability to survive in high-salinity soils under the conditions of Baraba. In recent years (1953-1958) he directed a project in the sovkhoses of the Altayskiy kray on the development of alkaline soil treatment methods using bankless plowing so as to prevent the turning out of the columnar alkaline layer surface; the purpose of this study was to permit food crop rotation with sweet clover and perennial grasses. The high effectiveness of gypsum treatment established for this type of rotation under the arid conditions of Kulunda permits the utilization of the rich local deposits of lake gypsum.

During his tenure as scientific director of the Ubinsk

Experimental Melioration Station (1938-1950), Nikolay Vasil'yevich forged an efficient team of scientific workers with whose aid he worked out the scientific foundations for the system employed in reclaiming the saline swamps of Baraba and which is now used by the kolkhozes and sovkhoses of the Novosibirskaya and Omskaya Oblasts for this purpose.

In recent years (1951-1957) he directed studies of the soil melioration conditions of the Aleyskaya irrigation system of the Altay kray, and of soil water and saline conditions; in addition, he headed studies on the establishment of reasons for the repeated salination of soils and the development of a system of measures for combatting soil salination and improving the meliorative state of a given system.

In the book entitled The Mastering of Virgin and Long Fallow Soils in the Altayskiy Kray (1955) N.V. Orlovskiy presented a well-founded treatment of old and modern practical experience in this field. He took an active part in the development of agricultural engineering methods for the mastering of virgin lands, as well as of agricultural production classification criteria for newly cultivated soils. A special expedition has initiated efforts on the establishment of production criteria for arable soils in the Altayskiy kray.

The lectures of N.V. Orlovskiy are characterized by rich content and an abundance of factual activity. Many of his associates defended dissertations and are now working at higher educational institutions and experimental facilities in Siberia and Kazakhstan. Nikolay Vasil'yevich Orlovskiy has been an active participant in some of the most important undertakings in the field of agriculture: the organization of sovkhoses, chemical treatment, forest belt planting, the mastery of virgin lands, development of farm operation systems, etc. His statements are always characterized by deep conviction, sincere concern for the success of the measure under consideration, and an ability to arouse the lively interest of the agricultural community.

N.V. Orlovskiy's studies were conducted under the difficult conditions of remote Western Kazakhstan, Western Siberia, and the Altay region, and his activities were therefore frequently of a pioneering character.

The numerous friends and students of Nikolay Vasil'yevich take this opportunity to wish him good health and further successes in the development of agronomic soil science and the preparation of agronomists for the Siberian regions.

SERGEY MIKHAYLOVICH LIPATOV

(on the occasion of his 60th birthday and 35th anniversary
of his scientific, pedagogical, and
social activities)

[Following is the translation of an unsigned
article in Vysokomolekulyarnyye Soyedineniya
(High Molecular Weight Compounds), No 12,
Moscow, 1959, pages 1868-1869.]

Sergey Mikhaylovich Lipatov, one of the leading
Soviet scientists in the field of high-molecular-weight
compounds and an outstanding social leader of our country
recently celebrated his 60th birthday and the 35th anniver-
sary of his scientific and pedagogical career.

Already at an early stage of his scientific studies
Sergey Mikhaylovich, investigating the syneresis of polymer
solutions, reached conclusions which were at basic variance
with the prevailing views of Kroyt on lyophilic colloids
as differing from lyophobic colloids only by virtue of con-
siderable solvation. Sergey Mikhaylovich demonstrated that
the role of solvation is not a decisive one, and that it
is actually the same in lyophilic colloids and low-molecular-
weight compounds.

Sergey Mikhaylovich was one of the first scientists
to take cognizance of the specific properties of high-mole-
cular-weight compounds as determined by their high molecular
weight. In his writings, S.M. Lipatov adduced arguments for
the necessity for a specific approach to the study of poly-
mers, distinct from the one employed in the study of lyo-
phobic colloids.

These progressive ideas were developed fruitfully
by S.M. Lipatov in his further studies on coagulation by
cooling, the thermal effects of interaction between high-
molecular-weight compounds and solvents, swelling phenomena,

the effect of temperature on the properties of polymer solutions, polymer thermodynamics and thermochemistry, etc.

The first laboratory in the USSR to specialize in polymers was founded by Sergey Mikhaylovich in 1931 at the All-Union Leather Industry Institute, where he was the first scientist to present a course of lectures on high-molecular-weight compounds. In 1936 he published a book entitled High-Molecular-Weight Compounds.

S.M. Lipatov does not limit himself to purely theoretical research. He has also carried out quite a sizeable number of extremely important practical studies in the field of textile dyes, the viscous process, etc. Sergey Mikhaylovich was also a pioneer in this field of polymer chemistry. As early as 1929, he organized an artificial fibres laboratory (the first in the USSR) at the Physical Chemistry Institute imeni Karpov.

S.M. Lipatov is presently engaged in an intensive effort for the preparation of highly-qualified scientific cadres. Many of his pupils are now successfully developing the science of high-molecular-weight compounds in the Soviet Union.

The editorial board of the journal Vysokomolekulyarnyye Soedineniya (High-Molecular-Weight Compounds) warmly congratulates S.M. Lipatov on his jubilee and wishes him long life, good health, and further successes on behalf of our great Motherland.

On 31 October 1959, the Belorussian SSR Academy of Sciences in Minsk held a festive meeting to mark the jubilee of S.M. Lipatov. After a report on the scientific and pedagogical activities of guest of honor presented by Academician of the Belorussian SSR Academy of Sciences B.V. Yero-feyev, there followed the presentation of a number of scientific papers and brief reports: "New Methods of Cellulose Modification" by Professor Z.A. Rogovin, "Thermochemical Studies of the Structure and Phase State of Polymers" by Docent S.I. Meyerson, "Gelatination in Polymetacrylic Acid Solutions" by Candidate of Chemical Sciences Yu.S. Lipatov, "The Polymerization of Cyclohexadiene" by Candidate of Chemical Sciences S.F. Naumova, "The Effects of Gamma-Radiation from Cobalt on the Properties of Starch" by Candidate of Chemical Sciences S.V. Markevich, and "A Study of Polyoses in Plant Tissues from the Standpoint of Age" by Candidate of Chemical Sciences A.I. Skrigan.

The guest of honor received many congratulatory messages and wishes for further successful work.

V.A. FLORIN

(on the occasion of his 60th birthday and 35th anniversary
of his scientific-technical and pedagogical
activities)

[Following is the translation of an article by
P.S. Neporozhniy, et al. in Gidrotekhnicheskoye
Stroitel'stvo (Hydraulic Engineering), No 3,
Moscow, 1960, page 64.]

The month of December 1959 marked the 60th birthday
and the 35th anniversary of the scientific-pedagogical
activities of Corresponding Member of the USSR Academy of
Sciences and Doctor of Technical Sciences Professor V.A.
Florin.

Upon his graduation in 1922 from the Leningrad
Communications Engineering Institute, V.A. Florin joined
the Moscow Electrical Power Stations System where he worked
for 25 years; during this time, he participated in the
planning of Volkhovstroy (Volkhov River Power Project),
Svir'stroy (Svir' River Power Project), the 5th "Red Octo-
ber" Hydroelectric Station, the Leningrad Commercial Ship-
ping Port Facility, and other major industrial and hydro-
technical projects of the Soviet Union. For the Volkhovstroy
he planned a number of metal and wooden bridges and construc-
tion structures. In the case of the Lower Svir' Hydroelectric
Power Station, V.A. Florin worked on the planning and intro-
duction of prefabricated reinforced concrete members in
both above- and below-water structures; this was also the
time when he planned highway bridges for Uzbekistan and
other reinforced concrete structures. Special mention
should be made of his plans for reinforced concrete columnar
structures and roof members for the engine room of the
Lower Svir' Hydroelectric Station which were designed to
withstand great travelling crane stresses. At the time he

was working for the Gidrostroyproekt and Gidroenergoproekt, V.A. Florin began to conduct intensive research on soil mechanics. During World War II, V.A. Florin carried out extensive studies and did a great deal of planning for the Farkhad, No 1 and 3 Lower Bozsuy, Salar, Khisharau, and other hydroelectric power stations in Uzbekistan. For this work V.A. Florin an honorary scroll from the Supreme Soviet of the Uzbek SSR.

In Uzbekistan V.A. Florin directed research on the investigation and confirmation of the possibility of erecting medium-height and tall earthen structures by the method of soil-water mixing without the use of mechanical packing. Later this method was widely employed in many construction hydroelectric stations in the Soviet Union.

As department chairman at the Leningrad Polytechnic Institute imeni M.I. Kalinin and laboratory director at the USSR Academy of Sciences Mechanics Institute V.A. Florin has continued to carry out numerous research assignments on behalf of the Gidroenergoproekt and Gidroproekt (hydroelectric power planning agencies) of the MS ES (Moskovskaya Sistema Elektrostantsiy -- Moscow Electrical Power Stations System), the Volga, Stalingrad, Gor'kiy, Kakhovsk, Kama, Narva, Knyazhegubsk, Iovsk, Shul'binsk, Bratsk, and other Soviet hydroelectric stations, as well as for the hydroelectric stations on the Hwang-Ho River and maritime port facilities in the Chinese People's Republic.

The scientific work of V.A. Florin encompasses a wide range of problems in soil mechanics and hydraulic construction; what is more, he has made significant original contributions in both of these areas.

V.A. Florin has made a significant contribution to the solution of problems involved in the determination of contact stresses at girder plate bases placed on a linearly-deformable foundation. With application to the calculation of dams, locks, hydroelectric stations, etc., he developed a method for determining contact stresses along irregular rigid structure bases on non-homogeneous surface foundations, as well as a technique for regulating structural stresses by means of temporary working seams (the Narva Hydroelectric Station). V.A. Florin published the first complete treatment and general methods of solution for the two- and three-dimensional problems of determining interstitial water pressure in saturated soils (compression theory) by regarding this process as an unbalanced filtration arising upon the

application of a load to the soil layer, or as a result of a change in the stress conditions. He succeeded in obtaining closed-form solutions for special cases. In the case of foundation and slope stability problems, he suggested methods for calculating unstabilized soil states which are of great importance to actual hydrotechnical construction practice. V.A. Florin was the first one to suggest a method for determination of structural sag by layers for both the two- and three-dimensional layers which takes into account lateral foundation soil expansion. He was also the author of the first guide to soil media modelling. V.A. Florin achieved considerable success in the study of the physical and theoretical foundations of dilution weakening phenomena in saturated sandy soils.

V.A. Florin is devoting much of his time to the problems of dynamic soil strength and creeping. On the basis of his numerous published writings, theoretical and experimental studies, and extensive engineering experience, he is presently about to issue a large three-volume work on soil mechanics. V.A. Florin's highly varied interests and the results he has achieved in the development of soil mechanics have earned for him richly-deserved fame both in the Soviet Union and abroad as one of the leading scientists and engineers in the above-mentioned fields.

Signed:

P.S. Neporozhniy, B.K. Aleksandrov, A.Z. Basevich, A.N. Voznesenskiy, P.D. Glebov, I.I. Levi, N.A. Malyshev, A.A. Nichiporovich, G.A. Russo, D.M. Tartakovskiy, N.L. Triger, N.A. Tsytovich, P.M. Yanovskiy.